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ABSTRACT

This project analyzes data from the parent component of the National Educational Longitudinal Study of 1988 to investigate changes in family educational involvement between students' 8th and 12th grades. Findings show that the patterns of parental involvement in adolescents' education change between the two grades. During high school, parents become less involved with monitoring students' individual behaviors and more concerned with their learning opportunities at school. By students' eighth grade, nearly all parents had postsecondary expectations, but few had taken specific actions to secure funds for college. During adolescents' senior year in high school, most parents report frequent discussions with them concerning postsecondary schools. At that time, parents also report that they have some knowledge about financial aid. A high proportion of 12th graders' parents expect to finance their child's further education through scholarships and grants, but fewer had applied for such programs before students' high school graduation. Consistent between-grade differences exist in the ways in which parents from different racial and ethnic backgrounds get involved with their adolescents' education and in their approach towards financing postsecondary education. Overall, findings indicate that many parents welcome opportunities for communication with schools and desire greater participation in the school decision-making process. They would also greatly benefit from guidance in their efforts to secure funds for postsecondary education. Four appendixes present a parent involvement factor analysis and parental variables from first, second, and college factor analyses. (Contains 20 tables and 9 references.) (Author/SLD)

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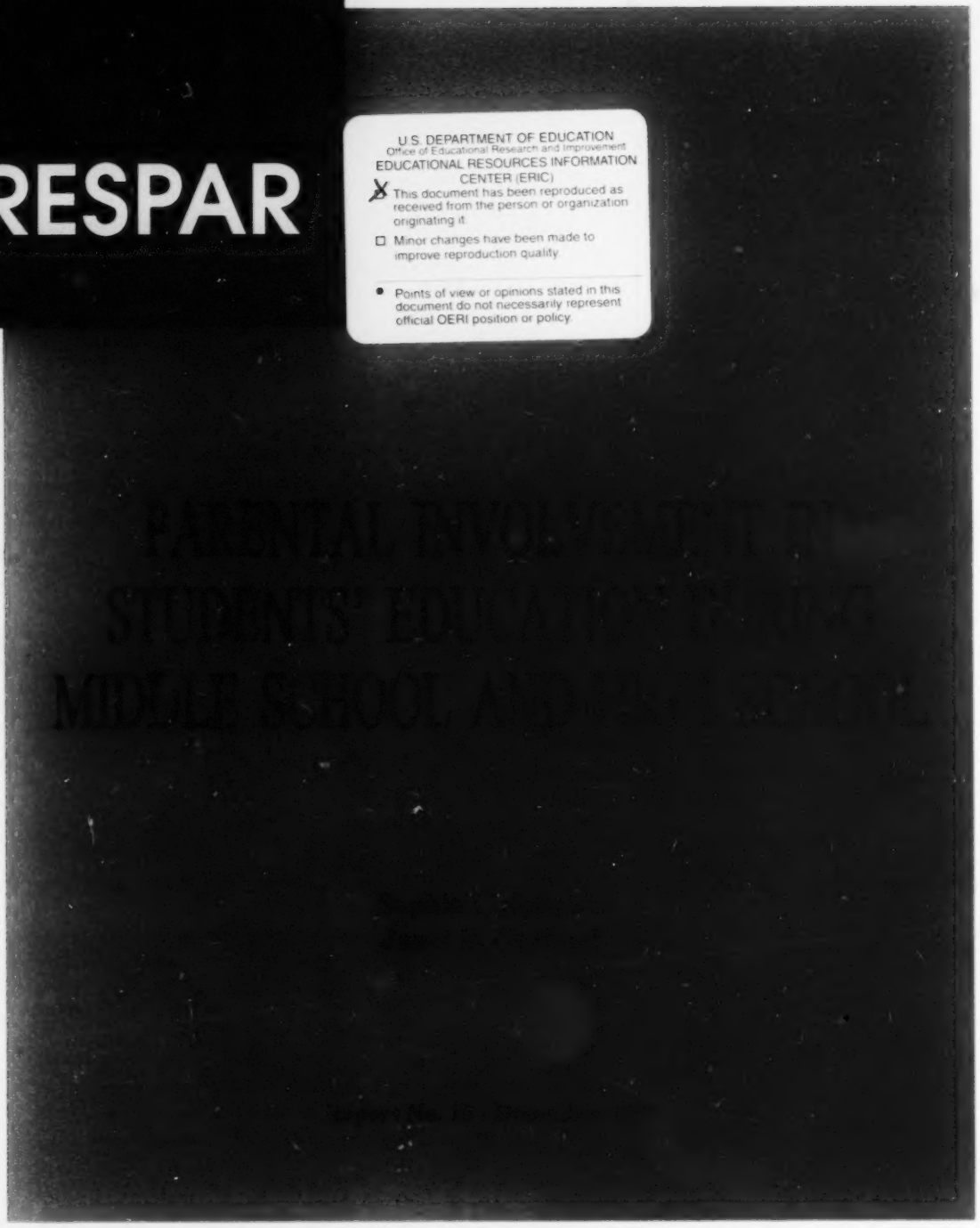

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PARENTAL INVOLVEMENT IN STUDENTS' EDUCATION DURING MIDDLE SCHOOL AND HIGH SCHOOL

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Report No. 18

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The Center

Every child has the capacity to succeed in school and in life. Yet far too many children, especially those from poor and minority families, are placed at risk by school practices that are based on a sorting paradigm in which some students receive high-expectations instruction while the rest are relegated to lower quality education and lower quality futures. The sorting perspective must be replaced by a "talent development" model that asserts that all children are capable of succeeding in a rich and demanding curriculum with appropriate assistance and support.

The mission of the Center for Research on the Education of Students Placed At-Risk (CRESPAR) is to conduct the research, development, evaluation, and dissemination needed to transform schooling for students placed at risk. The work of the Center is guided by three central themes — ensuring the success of all students at key development points, building on students' personal and cultural assets, and scaling up effective programs — and conducted through seven research and development programs and a program of institutional activities.

CRESPAR is organized as a partnership of Johns Hopkins University and Howard University, in collaboration with researchers at the University of California at Santa Barbara, University of California at Los Angeles, University of Chicago, Manpower Demonstration Research Corporation, University of Memphis, Haskell Indian Nations University, and University of Houston-Clear Lake.

CRESPAR is supported by the National Institute on the Education of At-Risk Students (At-Risk Institute), one of five institutes created by the Educational Research, Development, Dissemination and Improvement Act of 1994 and located within the Office of Educational Research and Improvement (OERI) at the U.S. Department of Education. The At-Risk Institute supports a range of research and development activities designed to improve the education of students at risk of educational failure because of limited English proficiency, poverty, race, geographic location, or economic disadvantage.

Abstract

This project analyzes data from the parent component of the *National Educational Longitudinal Study of 1988* to investigate changes in family educational involvement between students' eighth and twelfth grades. Findings show that the patterns of parental involvement in adolescents' education change between the two grades. During high school, parents become less involved with monitoring students' individual behaviors and more concerned with their learning opportunities at school. By students' eighth grade, nearly all parents had postsecondary expectations, but few had taken specific actions to secure funds for college. During adolescents' senior year in high school, most parents report frequent discussions with them concerning postsecondary schools. At that time, parents also report that they have some knowledge about financial aid. A high proportion of twelfth graders' parents expect to finance their child's further education through scholarships and grants, but fewer had applied for such programs before students' high school graduation. Consistent between-grade differences exist in the ways in which parents from different racial/ethnic backgrounds get involved with their adolescents' education and in their approach towards financing postsecondary education.

Overall, findings indicate that many parents are willing to participate in the school buildings and in the decision-making processes of high schools. They would also greatly benefit from guidance in their efforts to secure funds for postsecondary education.

Acknowledgments

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Introduction

The role of parents in managing children's educational experiences at home and at school has long been considered critical for children's success in school. However, it is only recently that researchers have begun systematic and extensive investigations of parental involvement beyond the early years of schooling. Recent research has investigated parents' involvement in students' education during the middle grades. This study expands that research by examining parents' involvement in high school and by tracing continuity and change in parental involvement between the middle grades and the last year of secondary education.

Background

Prior research has established that family involvement in children's education is an important factor for student success. Earlier studies focused on the role that parents play in increasing the learning opportunities and the success of students in elementary education. More recently, important advances have been made in the theoretical conceptualization of parental involvement and in the empirical investigations that extend from the elementary to the secondary school grades.

Conceptualizing Parental Involvement

This study conceptualizes parents' involvement in school and family-school connections from a social organizational perspective developed by Epstein (1990). This conceptualization is based on a theory of overlapping spheres of influence which focuses on the complex interrelationships of family, community, school, and peer groups as they affect student's well being and academic performance. School, family, and community partnerships include practices initiated by parents, educators, or other community members. These practices may occur at school, at home, or in the community and they reflect six different types of family involvement (Epstein, 1990, 1992; Epstein & Lee, 1995).

Type I: Refers to basic parenting obligations for the child's health, safety, and preparedness for school and for providing positive home conditions that support educational progress.

Type II: Refers to the basic obligations of schools to communicate with families regarding school programs and student progress (such as communications through memos, notices, report cards, and conferences with parents).

Type III: Refers to parents' participation in volunteering at school (such as assisting teachers, administrators, or students in classrooms) and in participating in school activities and events (such as student performances, sports, and other events).

Type IV: Refers to parental involvement in student learning at home, to parent-child-initiated requests for help, and to teachers' ideas about parents' involvement in home learning activities.

Type V: Refers to parental involvement in decision-making activities at school (such as participation in Advisory Councils, parent-teacher organizations, parent advocacy groups, and other school, district, or state level educational committees).

Type VI: Refers to school and parent collaborations with communities and community agencies that enhance the learning opportunities of children (such as programs for after-school care or health care, cultural events, and community services).

The significance of the theoretical perspective of overlapping spheres of influence lies not only in the identification of the different types of parental involvement, but also in the recognition that parents' involvement in children's education and family-school connections is not static, but is a complex phenomenon that is influenced by characteristics of the overlapping spheres of influence and the nature of the participants' interrelationships. Parental involvement may therefore vary by factors such as students' age and grade level, social background and experiences of families, and school policies (Epstein, 1992). This perspective points to the importance of expanding existing knowledge of how family involvement and student life change from the middle grades to high school, of what factors influence any observed changes, and of their effects on student progress.

Previous Research Findings

Researchers over the past fifteen years have sought to explore the nature of parents' involvement in their children's education at home and at school in order to establish effective policies for family-school programs and practices. The findings not only led to the development of the above typology by Epstein, but also challenged commonly held assumptions about the effects of social background on the levels and effectiveness of family-school partnerships.

A number of research studies show that parental involvement in children's learning activities positively influences their levels of achievement and motivation to learn (Epstein, 1992). Other studies confirm that families of higher socioeconomic background and higher levels of education have higher and more effective levels of parental involvement (Lareau,

1987; Baker & Stevenson, 1986; Useem, 1982). Families from different social class and race/ethnic backgrounds also engage in different types of parental involvement which have varying effects on student achievement and well being (Schneider & Coleman, 1995).

A second line of research points to the importance of school practices in involving all families and helping students succeed in school (Epstein 1990). Findings from those studies show that minority parents can be successfully involved in their children's education and that school and teacher interventions help these families succeed (Epstein, 1990, 1992).

Parental involvement dramatically declines as students enter the middle grades and even more so as they enter high school. Data from the public use files of the *National Educational Longitudinal Study* of 1988 (NELS:88) greatly enhanced the study of parental involvement in secondary education. The longitudinal nature of this national survey of eighth graders, their parents, and their schools provides the necessary data to study patterns of parental involvement over time. The first two waves of the study produced important research findings concerning parental involvement in the middle grades and the early years of high school.

To date, most of the research using the NELS:88 data set has been conducted using the base year surveys at the middle school level. The findings reveal that most parents are trying to supervise and guide their children during the middle grades, but with limited assistance from schools. As a result, families are functioning, but struggling. They are more likely to supervise and set rules about activities that families traditionally control (such as doing family chores) than about activities for which they lack information (such as improving report card grades). Parents report a serious lack of communication from schools, and the families, themselves, contact the schools infrequently. A big proportion of middle grade students and their families are isolated from or unconnected with their schools and are uninformed about students' progress and their school's programs. It seems that few middle schools have comprehensive programs for parental involvement and few parents volunteer at school (Epstein & Lee, 1995). Studies suggest that if middle schools were to create programs that encourage school-family contacts and guide parents' interactions, more families would participate in schools and would be able to guide their children in their learning efforts (Epstein & Lee, 1995).

A study by Lee (1995) uses data from the base year and first follow-up surveys of NELS:88 to compare parental involvement between the eighth and tenth grades. The study produced valuable information concerning the extent of continuity in parental involvement between middle grades and high school. Family involvement in students' education declines as students move from the middle grades to the early years of high school. However, some parents continue their high level of involvement. Despite changes in school environments and

policies that come with transferring to a high school, those parents who were highly involved in the middle grades tend to continue their involvement in high school as well. In fact, the effects of social background characteristics (such as SES, race/ethnicity, and gender) on levels of parental involvement in the tenth grade are minimal in comparison to the effects of prior parental involvement. Race/ethnic differences in types of parental involvement continue to exist in the tenth grade. African American parents are most likely to conduct family discussions, attend school meetings and contact teachers. Asian American parents are least likely to participate in school visits and volunteering, but are similar to White and Latino parents on other types of involvement (Lee, 1995).

Although the study by Lee produced valuable information concerning trends in parental involvement over time and effects on student progress, it was limited by the type of data available at the time of analysis. Parents were not interviewed again in the first follow-up of the NELS:88 study when their children reached the tenth grade. Therefore, tenth grade information is based not on parents' responses, but on students' reports concerning their parents' behaviors and practices. Analyses of data from parents are important for validating the above findings and continuing this line of research to the last years of high school.

The present study seeks to further existing knowledge of parental involvement in students' education during high school. It extends the work of Lee (1995) in two important ways. First, it uses the second follow-up study of NELS:88, which provides data during students' senior year in high school. Second, it uses information from parents who were interviewed again in the second follow-up. Thus, the study compares parental involvement from the middle grades to the last year of high school, with data from parents at both points of time. More detailed information on the data source and the analytical strategies used is provided in the section that follows.

Data and Methods of Analysis

The data used for this project come from a major longitudinal panel study sponsored by the National Center for Education Statistics. The *National Educational Longitudinal Study* (NELS:88) was conducted to explore student progress from the eighth grade through high school, college, and the work force.

The Base Year study is based on a representative sample of the nations' eighth graders in 1988 and consists of student, parent, teacher, and school administrator surveys. The First Follow-up study conducted two years later in 1990 included three of the four groups —

students, teachers, and school administrators. The parent survey was not repeated at this time. In the Second Follow-up, conducted two years later in 1992, all four component groups were re-interviewed. This report analyzes data from the Base Year and the Second Follow-up parent surveys. The sample consists of more than 15,000 parents who were followed from 1988 to 1992. The large size of the sample and its longitudinal design make NELS:88 a rich and important data set that can be used to address many questions about national patterns of parental involvement and its effects from the middle grades to high school and beyond.

Because the main objective of this study is to compare parental involvement between the eighth and the twelfth grades, analyses use data from the sub-sample of 13,580 parents whose children remained in school through the twelfth grade. Parents whose children dropped out of school are not included in this study. All data presented here are based on this sample, weighted by the appropriate sampling weight (F2PANLWT). To allow for tests of statistical significance, the weight has been standardized (F2PNWLT/mean F2PANLWT).

The second objective of this study is to identify clusters of variables that can be combined into different indices of parental involvement. Each parent questionnaire includes a great number of questions that can be considered as indicators of parental involvement, many of which are unique to the eighth and twelfth grades. The construction of these indices is important for between-grade comparisons and for future analyses that will investigate the effects of parental involvement on student outcomes. For the purpose of index construction, factor analyses were conducted separately for the base year and second follow-up data. Appendices A, B, C, and D provide more detailed information on the factor analyses.

Research Findings

This study begins by identifying variables common to the eighth and twelfth grade parent surveys. Unfortunately, identical variables for types four through six of Epstein's parental involvement typology are not included in both surveys. For this reason comparative analyses are conducted for parental involvement types one through three and for parental satisfaction with school only. The study continues with the construction and comparison of parental involvement indices between the two grades.

In Part I, we examine the common variables in the Base Year and Second Follow-Up parent surveys, including a separate examination of race/ethnic differences in parent involvement by grade. In Part II, we examine college-related parent involvement, again including a separate examination of race/ethnic differences. In Part III, we report on factor

analyses that create indices that represent each type of parental involvement in Epstein's (1992) typology, and then examine race/ethnic variations in these indices. Finally, in Part IV, we create indices of college-related parent involvement and examine associations between eighth and twelfth grade.

I. Parental Involvement: Common Variables in Base Year and Second Follow-Up Parent Surveys

Parental Involvement Type I: Parenting and Child Rearing

Between the eighth and twelfth grades, most parents continue to maintain rules for students' keeping their grade point average. By the twelfth grade though, a significant proportion of families have dropped rules for teens' homework and daily discussions concerning school activities (Table 1a, "All" columns). These changes do not mean that parents lose interest in their children's education. Indeed, from two-thirds to three-fourths of twelfth grade parents maintain family rules and behaviors for teens about high school. Moreover, their educational expectations increase as their teens approach high school graduation. Although the percentages do not include parents of students who dropped out of school, the comparisons of those who remained in school are telling. A higher proportion of parents expect their children to receive post-baccalaureate degrees (MA or professional degrees) in the twelfth than in the eighth grade (Table 1b, "All" columns). Parents may actually place greater importance on managing their child's educational experiences as their child gets closer to high school graduation. This is indicated by their participation in decisions concerning selection of high school courses and additional educational expenses.

In the eighth grade, 48% of parents expected that their teens would make their own coursework selections in high school (Table 1c, "All" columns). By the twelfth grade, 41% of parents reported that their teen made course selections on his/her own. About 53% of the parents reported that *they* were involved in course selections, either by discussing this matter with their teen or by equally participating in these decisions. The percentage of parents who reported private school spending almost tripled from the eighth to the twelfth grade (Tables 1d, 1e, "All" columns).

Table 1a: Parental Rules and Communications with Child by Grade									
Eighth Grade					Twelfth Grade				
Asian	Latino	African American	White	All	Asian	Latino	African American	White	All
Percent with family rules about maintaining grade average									
74	77	8[illegible]	69	72	70	80	84	68	71
Percent with family rules about doing homework									
89	94	95	91	92	78	88	90	77	79
Percent who talk to child about school regularly									
70	72	78	84	82	54	53	60	64	62
Average percent of total parent sample									
3.7	7.7	12.2	76.4	100 %	3.7	7.7	12.6	76	100%
Average N				11,221					11,121

Source: Survey of Parents, NELS:888 Base Year and Second Follow-Up

Table 1b: Parental Educational Aspirations for Child by Grade										
	Eighth Grade					Twelfth Grade				
Education Aspired	**Asian**	**Latino**	**African American**	**White**	**All**	**Asian**	**Latino**	**African American**	**White**	**All**
High School or Less	6%	12%	11%	10%	10%	7%	1%	2%	3%	3%
Some College	15	31	25	25	25	9	13	13	18	17
B.A.	36	28	39	44	42	38	37	31	41	39
M.A. or equiv.	16	12	11	12	12	26	24	23	22	23
M.D., Ph.D. or equiv.	27	16	13	9	10	30	24	30	15	18
Average % of total parent sample	3.7	7.7	12.6	76	100%	3.7	7.7	12.6	76	100%
Average N					11,439					11,441

Source: Survey of Parents, NELS:88 Base Year and Second Follow-Up

Table 1c:Eighth Grade Parents' Reports of Involvement with Course Selection					
Who will decide/decides about high school course selections					
	Asian	**Latino**	**African American**	**White**	**All**
Student	52%	52%	48%	48%	48%
Teacher/counselor	22	24	25	24	24
Parent	21	21	24	25	25
Others	5	3	3	3	3
Average % of total parent sample	3.7	7.6	12.1	76.6	100
Average N					11,049

Source: Survey of Parents, NELS:88 Base Year and Second Follow-Up

Table 1d: Twelfth Grade Parents' Reports of Involvement with Course Selection					
Who decides about high school course selections					
	Asian	**Latino**	**African American**	**White**	**All**
Teen alone	49%	61%	54%	36%	41%
Teen with parent	27	21	20	37	33
Teen/parent equally	18	11	19	21	20
Parent alone or with teen	6	7	7	6	6
Average % of total parent sample	3.7	7.7	12.6	76	100
Average N					11,305

Source: Survey of Parents, NELS:88 Base Year and Second Follow-Up

Table 1e: Additional Educational Expenses by Grade									
Eighth Grade					Twelfth Grade				
Asian	Latino	African American	White	All	Asian	Latino	African American	White	All
Private School									
15%	8%	3%	8%	7.5%	27%	20%	18%	20%	20%
Tutoring									
9	4	3	5	5	9	6	4	5	5
Average percent of total parent sample									
3.76	7.64	12.6	76	100%	3.6	7.7	13.25	75.6	100%
Average N				10,360					10,753

Source: Survey of Parents, NELS:88 Base Year and Second Follow-Up

Parental Involvement Types II and III: Parent/School Communications about School Programs and Student Progress, and Volunteering at School

School-initiated contacts with parents tend to be different in high school than in the middle grades. Fewer parents report that the school contacts them about their child's academic performance or behavior in the twelfth than in the eighth grade (Table 2a, "All" columns). However, a much higher proportion of parents report that the school contacts them about their teen's academic programs and about doing volunteer work in the twelfth than in the eighth grade.

Parent-initiated contacts about academic programs and volunteering are also higher in high school than in the middle grades (Table 2b, "All" columns). Overall, the big change in parent/school communication between the two school grades occurs in communications about parents' involvement in academic choices and school activities. Levels of communication about students' individual progress do not change much between the two grades. By twelfth grade, 41% report contacting the school about volunteering and 46% report contacting the school about the school's academic program.

Parental Involvement in School
Type II Indicators

Table 2a: School-initiated Contacts with Parents by Grade

Eighth Grade					Twelfth Grade				
Asian	**Latino**	**African American**	**White**	**All**	**Asian**	**Latino**	**African American**	**White**	**All**
Percent of parents contacted about student's academic performance									
66	71	69	67	68	47	55	47	53	52
Percent of parents contacted about school's academic program									
40	37	36	36	37	38	41	43	44	44
Percent of parents contacted about student's school behavior									
19	29	39	24	26	16	19	26	18	19
Percent of parents contacted about doing volunteer work									
31	24	30	36	34	50	43	51	59	56
Average percent of total parent sample									
3.6	7.5	12.3	76.5	100%	3.6	7.7	12..5	76	100%
Average N				11,177					11,359

Source: Survey of Parents, NELS:88 Base Year and Second Follow-Up

Table 2b:Parent-initiated Contacts with School by Grade

Eighth Grade					Twelfth Grade				
Asian	**Latino**	**African American**	**White**	**All**	**Asian**	**Latino**	**African American**	**White**	**All**
Percent who contacted school about doing volunteer work									
18	16	19	24	22	33	32	35	43	41
Percent who contacted school about student's academic performance									
43	54	53	55	54	41	54	61	53	53
Percent who contacted school about school's academic program									
76	68	76	69	35	40	41	51	46	46
Average percent of total parent sample									
3.6	7.4	12	76.9	100%	3.6	7.7	12.5	76.1	100%
Average N				10,945					11,351

Source: Survey of Parents, NELS:88 Base Year and Second Follow-Up

Parental Satisfaction with School

The degree to which parents are satisfied with their child's school does not change much between the eighth and twelfth grades. In both the middle grades and high school, the majority of parents are satisfied with their children's preparation for college. Parents seem to be a little less satisfied with schools' priority on learning, school standards, and parental involvement in school policy in the twelfth grade than the eighth grade (Table 3, "All" columns).

Table 3 : Indicators of Parental Satisfaction with School By Grade

	Eighth Grade					Twelfth Grade				
	Asian	**Latino**	**African American**	**White**	**All**	**Asian**	**Latino**	**African American**	**White**	**All**
School places high priority on learning										
Strongly Agree	45%	35%	36%	35%	36%	37%	36%	27%	32%	31%
Agree	48	58	56	58	58	56	63	59	57	58
School's standards are realistic										
Strongly Agree	22%	20%	25%	19%	20%	19%	17%	18%	19%	19%
Agree	17	71	66	71	71	68	68	67	68	68
Students are prepared well for college										
Strongly Agree	21%	19%	21%	14%	16%	25%	17%	19%	21%	20%
Agree	58	58	53	62	61	60	63	57	55	56
Parents have adequate say in school policy										
Strongly Agree	12%	12%	10%	7%	8%	10%	7%	7%	7%	7%
Agree	67	59	56	55	56	59	58	52	50	51
Parents work together in supporting school policy										
Strongly Agree	16%	15%	15%	11%	12%	12%	9%	9%	10%	10%
Agree	69	63	64	64	64	62	60	58	58	58
Average percent of total parent sample										
	3.6	7.6	12.2	76.6	100%	3.6	7.7	12.6	76	100%
Average N					10,986					11,273

Source: Survey of Parents, NELS:88 Base Year and Second Follow-Up

Overall, the majority of parents report high levels of satisfaction with their child's school in both grades. Although more parents report that they have at least some communications with their teen's school in the twelfth than in the eighth grade (Table 2a, b), parents are somewhat less satisfied with their child's high school than they were with their middle grade school. The one aspect that parents are least satisfied with is their role in school policy. About 36% of parents of eighth graders and 42% of parents of twelfth graders felt that they did not have an adequate say in school policy (Table 3, "All" columns). In addition, about one-third of parents are not satisfied with the degree to which parents work together to support high school policy. These data show that a significant number of parents desire higher levels of input and participation in school policies, especially in high schools.

Summary

As students progressed from the eighth to the twelfth grade, some changes occurred in parental involvement at home and at school. As teens gain maturity and approach high school graduation, parents tend to be less involved with their daily behavior and activities. Possibly because they increase their educational expectations for their adolescents, parents tend to maintain an interest and involvement in high school learning opportunities. Parents become more involved in high school course selections and are more likely to spend money for private schooling.

The content of school-initiated communications with parents shifts as students progress from middle school to high school. Parents of twelfth graders report more often that schools contact them about high school programs and volunteering at school than do parents of eighth graders. In moving from middle grades to high school, both parents and schools tend to place more emphasis on academic programs and parental involvement in school and less emphasis on students' individual behaviors.

Although most parents tend to be satisfied with their children's schools, their satisfaction tends to be slightly lower for high schools than it was for middle schools; this is especially true for parental involvement in school policy.

Race/Ethnic Differences in Parental Involvement by Grade

Earlier studies indicate that parents of different racial/ethnic backgrounds tend to have different patterns of involvement in their children's education (Muller & Kerbow, 1993; Lee, 1995). This section investigates the race/ethnic differences that occur from the eighth to the twelfth grade.

Parental Involvement Type I: Parenting and Child Rearing

In both Base Year and Second Follow-up surveys, parents were asked whether they have family rules about their teen maintaining a certain grade average and doing homework, and whether they have regular talks with their teen about school. When parents' responses are compared between the middle grades and high school, some general race/ethnic patterns emerge (Table 1a). All race/ethnic groups tend to maintain their family rules about teens' grades up to high school graduation. Fewer parents of all groups report having rules about homework in high school than in middle school; the reduction of maintaining these rules is strongest among Asians and Whites. All parents report reducing the frequency of talking to their teen about school between the eighth and twelfth grade.

When race/ethnic differences are examined in the proportion of families that maintain rules and communications with teens, the following patterns emerge (Table 1a): (1) More African American and Latino parents than Asian or White parents report having rules for their twelfth graders concerning grade average and homework; (2) African American and Latino parents tend to have the highest levels of supervision of teens' daily activities in both middle grades and high school; (3) White and Asian American parents most often reduce their daily supervision as their child grows older.

As noted earlier, parents of students who stay in high school tend to increase their educational expectations as their children reach the twelfth grade. The greatest changes between the eighth and twelfth grades are a drop in the proportion of parents who expect their child not to complete high school or receive only a high school diploma, and an increase in the proportion of parents who expect their children to receive post-baccalaureate degrees. These changes are greater among African American and Latino than among White and Asian American parents (Table 1b). Actually, the strongest increase is among African American parents who expect their teens to receive an MD or other professional degrees. Only 13% of African American parents had such high expectations for their children in the eighth grade. By the twelfth grade, this percentage more than doubled to 30%. This percentage is double that of Whites and equals that of Asian Americans.

Regarding high school course selections, the eighth grade data show that about one-half of parents from all race/ethnic backgrounds expected that their teens would be making their own high school course selections (Table 1c). By the time students reached the twelfth grade, race/ethnic differences in course decisions significantly increased (Table 1d). Latinos report that their teen makes high school course selections alone most often (61%), whereas only about

one-third (36%) of white parents report that their children make such decisions alone. White parents discuss course selections or share course decisions equally with teens most often.

Race/ethnic differences in high school course decision-making are strong and are undoubtedly partially due to differences in parental education and socioeconomic status. However, race/ethnic differences are so large that they may not be completely accounted for by socioeconomic differences. Even differences between groups with similar levels of socioeconomic status, such as African Americans and Latinos or Asian Americans and Whites, are quite large.

Race/ethnic differences are also evident in the proportion of parents who report expenses for private education (Table 1e). Although the greatest between-grade increases in the proportion of parents reporting private school expenses occur among African Americans, Asian Americans continue to be the group that uses private schools the most.

Parental Involvement Type II and III: Parent/School Communications about School Programs, Student Progress, and School Volunteering

Race/ethnic comparisons in parent/school communications indicate that African Americans experience the sharpest between-grade decreases in school-initiated contacts about student behavior and student academic performance (Table 2a). In general, increases in school-initiated contacts about parents' volunteering at school are dramatic and interesting for all race/ethnic groups. The greatest increase occurs among Whites; their *school-initiated* contacts concerning volunteering at school increase by 23% from the eighth to the twelfth grade. *Parent-initiated* contacts about volunteering among Whites also increase by 19% (Table 2b).

Asian Americans report the greatest drop in parent-initiated contacts concerning the school's academic program (a drop from 76% in the eighth grade to 40% in the twelfth grade, Table 2b). The reasons for these race/ethic differences in parent/school communications are not clear. Because the different groups attend somewhat different schools (with Asians most likely to attend private school), race/ethnic differences in parent/school communications may reflect not only socioeconomic or cultural differences, but also differences in the policies of public and private schools.

Parental Satisfaction with School

Race/ethnic differences in parents' satisfaction with school are less dramatic than those reported above. All parents report a slight drop in satisfaction with school from the eighth to the twelfth grade with only small race/ethnic variations (Table 3). Asian and African Americans show the largest drops in satisfaction with their role in school policy. Despite this,

Asian Americans continue to be the parents who are most satisfied with their role in school policy. White parents tend to have the lowest levels of satisfaction with their role in school policy, especially in the eighth grade.

Summary

Overall, there are important race and ethnic trends in parents' reports of involvement between the eighth and twelfth grades. African American and Latino parents have the highest levels of parental supervision and tend to maintain that supervision through their teen's senior year in high school. Between middle grades and high school, Latinos and, even more so, African Americans, increase their educational expectations for their children. By their teen's senior year, the parents who have the highest educational expectations for their children are Asian Americans and African Americans. Surprisingly, White parents tend to have the least expectations for post-baccalaureate degrees for their teens.

White parents are lowest in maintaining specific rules about grades and homework but highest in reporting regular discussions about school. White parents have the highest levels of involvement in high school course selection and in school communications as well.

Along with their high levels of student supervision and their increasing educational expectations, African Americans experience the sharpest between-grade drop in school-initiated contacts regarding student progress. The reasons for this drop are not clear; they may be due to a drop in problematic behaviors of these students during high school. Patterns of parental involvement of Latinos are similar to those of African Americans, but are less dramatic. The only exception is that Latinos have a very high proportion of teens who make coursework decisions on their own.

Asian American parents do not report as dramatic between-grade changes in parental supervision and educational expectations as other groups. The most notable between-grade change for this group is in their drop in initiating contacts with the school concerning school academic programs. Perhaps Asian American parents are involved in the children's academic opportunities in a different way, such as, by exercising school choice and selecting private education.

Race/ethnic differences in between-grade changes in parental involvement seem to diverge in some respects and converge in others. Differences by race/ethnicity widen between students' eighth and twelfth grades for family rules concerning grades, homework, and decision-making over course selection. They diverge somewhat less in school-initiated contacts regarding volunteering at school, and both parent- and school-initiated contacts about students' academic performance.

The gaps in race/ethnic differences narrow from the eighth to twelfth grades in terms of educational expectations of parents, private school expenses, parent-initiated contacts with school regarding volunteering and academic programs, and parents' satisfaction with their role in school policy.

II. College-Related Parental Involvement

Another important aspect of parental involvement in children's education concerns parents' actions and behaviors that enhance students' opportunities to attend postsecondary education. Although such variables may be considered as indicators of parental involvement Type I (parenting) in Epstein's typology (1992), they are presented in a separate section for two reasons: first, these variables are important specifically for postsecondary educational issues; second, direct comparisons between grades are not possible for these variables, and therefore they require a different presentation than the data reported in previous sections.[1]

Eighth Grade

About ninety percent of parents in this sample expect their eighth grader to attend some form of postsecondary education, and about one-half of them had already begun saving for this purpose (Table 4a, "All" column). The most common form of savings was opening a bank account;[2] 79% of the families who started saving for college had opened a savings bank account. A high proportion of parents who started saving for college also bought insurance policies (42%) or made investments in stocks and real estate (46%).

By the time their child reached the eighth grade nearly one-half of parents who had begun saving for college had saved about $3,000 or less (Table 4b, "All" column). A high proportion of parents expected to make substantial savings during their child's high school years. About 46% expected to set aside more than $10,000 for their child's college education.

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[1] Fewer college-related variables were included in the eighth grade parent survey than the twelfth grade. In some instances where common variables between grades do exist, different sub-samples of parents answered these questions in 1988 and 1992. Because of non-equivalent samples, between-grade comparisons cannot be made for some of these common variables.

[2] The sample size drops significantly for this analysis because many variables are relevant to only portions of the total sample. For example, the variables concerning the type of savings/investments for financing college are relevant only to one-half of the parents, who had already started saving for college.

Table 4a: Eighth Grade Parental Involvement — Planning for College					
Variable Description	**Asian**	**Latino**	**African American**	**White**	**All**
Expect child will go on to additional education	96%	91%	93%	93%	91%
Saved money for child's ed after high school	44	56	56	46	51
Average N	405	831	1,366	8,244	12,882
Types of savings/investments used :					
Started a savings account	80%	74%	73%	80%	79%
Bought an insurance policy	39	33	48	42	42
Bought U.S. savings bonds	26	23	34	34	33
Made investments in stocks/real estate	55	36	29	49	46
Set up a trust fund	24	13	10	15	15
Taken an additional job	27	18	21	22	22
Established another form of savings	51	33	37	36	36
Average N	178	283	445	3,547	4,016

Source: Survey of Parents, NELS:88 Base Year and Second Follow-Up

Table 4b: Eighth Grade Parental Involvement — Financing College					
Variable Description	**Asian**	**Latino**	**African American**	**White**	**All**
Amount of money set aside for child's future education					
< $1,000	**13.5%**	**34%**	**34%**	**19%**	**22%**
$1,000 - 3,000	**20**	**28**	**28**	**28**	**27**
$3,000 - 6,000	**15**	**19**	**14**	**18**	**17**
$6,000 - 10,000	**9**	**8**	**15**	**13**	**13**
> $10,000	**42**	**11**	**8**	**23**	**21**
Amount of money expect to set aside					
< $3,000	**7%**	**18%**	**15%**	**12%**	**12%**
$3,000 - 6,000	**11**	**27**	**20**	**20**	**20**
$6,000 - 10,000	**14**	**20**	**30**	**21**	**22**
$10,000 - 15,000	**17**	**13**	**13**	**14**	**14**
> $15,000	**51**	**21**	**22**	**33**	**32**
Average N	**205**	**315**	**502**	**3,902**	**4,989**

Source: Survey of Parents, NELS:88 Base Year and Second Follow-Up

Table 4c: Eighth Grade Parental Involvement — Need of Assistance in College Financing					
Variable Description	**Asian**	**Latino**	**African American**	**White**	**All**
Can pay for child's ed. without assistance	29%	16%	12%	22%	21%
Family not willing to go into debt for ed.	23	16	15	16	16
Not much information on financial aid	29	31	28	19	22
Don't see way to get money for college	11	17	21	7	10
Relatives will help pay for child's ed.	7	7	16	11	11
Average N	382	746	1,249	7,744	10,270

Source: Survey of Parents, NELS:88 Base Year and Second Follow-Up

Twelfth Grade

Most parents (90%) discussed particular postsecondary schools with their twelfth graders and about one-third of them offered to take their teen to a private counselor (Table 5a, "All" column). When asked which academic-related factors are very important for their teens' choice of college, parents pointed to the school's curriculum, the desired academic program, and their teen's academic preparation. Fewer parents mentioned the school's track record in job and graduate school placement, possibly because this information is not readily available to parents.

About one-half of the parents indicate that they are aware of different loan programs that are available and most stated that they had discussions or read about financial aid issues (Table 5b, "All" column). About half of the parents had talked to a high school guidance counselor or college representative about financial aid, and about one-fourth had talked to a loan officer.

To finance their teen's postsecondary education, 63% of the parents plan to use student grants and scholarships. About one-half of the students had actually applied for scholarships or grants by the spring semester of their senior year in high school.

Table 5a: Twelfth Grade Parental Involvement — Planning for College					
Variable Description	**Asian**	**Latino**	**African American**	**White**	**All**
Choosing postsecondary schools					
Talked to teen about particular schools	82%	80%	84%	93%	90%
Talked to teen in general about schools	79	75	80	82	81
Gave teen information from school	61	71	71	72	72
Offered to take teen to private counselor	23	28	26	31	30
Average N	351	593	675	6,353	9,225
Academic/career factors very important for school choice :					
Curriculum	68%	75.5%	82%	69%	71%
School's track of job placement	67	71	84	59	65
Academic preparation	79	80	83	73	49
School's track of graduate school placement	59	66	74	43	75
Desired program available	76	81	90	76	78
Average N	346	601	957	6,343	9,225

Source: Survey of Parents, NELS:88 Base Year and Second Follow-Up

Table 5b: Twelfth Grade Parental Involvement — Financing College					
Variable Description	**Asian**	**Latino**	**African American**	**White**	**All**
Financing postsecondary education parent knows about:					
State student loan program	43%	39%	55%	53%	52%
Federal student loan program	47	38	53	55	53
College student loan program	51	45	62	58	57
Private education loans	48	37	50	58	55
Average N	382	793	1299	7830	9,225
Communications concerning financial aid:					
Discussed/read about	62%	62%	74%	76%	74%
Talked with high school guidance counselor	50	47	58	52	53
Talked with college representative	45	52	57	57	56
Talked with loan officer	21	16	19	25	23
Read U.S. Department of Ed information	52	59	55	59	58
Read college information	71	70	73	79	77
Average N	262	533	1269	6244	9,225
Plan to use for teen's college:					
Loans	44%	45%	52%	47%	26%
Scholarships/grants	65	68	79	60	63
Work programs	48	54	60	45	23
Average N	385	71	1294	7836	9,225
Teen has applied for:					
Loans	30%	20%	27.5%	26%	26%
Scholarships/grants	58	45	54	52	52
Work Programs	25	20	30	22	23
Financial Aid	56	46.5	56	44	46
Average N	385	788	1297	7859	9,225

Source: Survey of Parents, NELS:88 Base Year and Second Follow-Up

Summary

Nearly all parents expected their eighth grader to continue schooling beyond high school, but only about one-half had already started saving for this purpose, usually by opening a savings bank account. Parents who began saving collected only small sums by the eighth grade and expected to save more during their child's high school years.

By the twelfth grade, most parents had discussions with their children about postsecondary schools and considered their teen's academic preparation and school programs as the most important academic factors for choosing a school. Most parents expected to finance their teen's further education through grants and scholarships, but only about one-half had applied for such programs by the spring of the student's senior year; about one-fourth had talked to representatives of different institutions about financial aid.

Race/Ethnic Differences in College-Related Parental Involvement

Eighth Grade

A slightly higher percentage of African American and Latino than White or Asian parents stated that they started saving for college by the eighth grade (Table 4a). Among those who started college savings, Asian American and White parents are more likely to have opened a savings bank account than African American or Latino parents. Asian Americans are those who are most likely to have made investments in real estate or stocks and to have taken an additional job. African Americans are those most likely to have bought an insurance policy.

The amount of actual and expected savings for the eighth grader's college education varies dramatically by race/ethnicity (Table 4b). About 42% of Asian American parents had already saved more than $10,000, much more than all other ethnic groups. Moreover, about one-half of Asian American parents expect to save more than $15,000 for their child's further education. Only about one-third of White and 20% of African American and Latino parents expect to save that much for their teen's college education. Given these trends in savings it is not surprising to see that a higher proportion of Asian American than any other parents are likely to state that they do not need assistance for their child's further education (Table 4c). These parents also report that they are unwilling to go into debt for this purpose.

African American and Latino parents of eighth graders started saving for their child's college education at percentages that are even higher than those of Asian Americans (Table 4a). Unfortunately, most likely due to their lower earning power, one-third of these parents had saved $1,000 or less (Table 4b). A higher percentage of African American, Latino and Asian American parents than White parents report that they have limited information about ways of financing their children's college education. African Americans, more than any other group,

stated that they do not see any way to get money for this purpose, but that they will be helped by other relatives in paying for their child's college education (Table 4c).

White parents report similar plans for financing college as Asian Americans, but have saved and expect to save less money than Asian Americans. White parents are also more willing to go into debt for their child's college education and a high percentage of them (80%) state that they have information concerning financial aid. Overall, more minority than White parents stated that they have limited information on financial aid (Table 4c).

Twelfth Grade

When race/ethnic differences are investigated for the twelfth grade college-related variables, White parents are most likely to discuss specific postsecondary schools with their teen (Table 5a). Race/ethnic differences also exist with regard to which academic factors are considered very important for choosing a school. African Americans are most likely to mention availability of the desired program and the school's track record in job and graduate school placement as criteria for choosing a college.

African American and White parents are most knowledgeable about financial aid; African Americans are most likely to plan using scholarships/grants, work programs, and loans to finance their child's further education (Table 5b). Despite these stated intentions, more Asian than African American parents report that they have already applied for scholarships/grants and loans. African Americans report that their teen has applied for work programs more than any other group.

Summary

Race/ethnic groups differ in the ways that they plan to finance their children's postsecondary education. Asian American parents favor financing at least some college education on their own. They are less willing to go into debt for this purpose, so they are more likely than any other group to have started savings and a second job by the time of their child's eighth grade. By that time, a substantial proportion of Asian American parents have significant savings in the form of bank accounts, stocks, and real estate investments. Because information on college financial aid is not uniformly distributed throughout the population, it is not surprising that minority groups with high earning power (such as Asian Americans) plan to finance their child's college education through savings, even if that means taking a second job.

Overall, twelfth grade data show that in choosing a postsecondary school, African Americans more than parents of any other group consider the school's placement record beyond graduation. African American and White parents are more likely than other groups to communicate with different agencies and personnel about financial aid and therefore are more

knowledgeable about different financial aid programs. Despite this, it is Asian Americans who apply early for scholarships, grants, and loans.

III. Creation of Parental Involvement Indices and Analyses

This section of data analysis shifts attention to the creation of parental involvement indices by conducting factor analyses.

Eighth Grade Parental Involvement and Analyses

Factor analysis yields twelve factors of parental involvement in the eighth grade. With the exception of school-initiated academic contacts, the factors generated do not distinguish whether parent/school communications are initiated by parents or schools, as Epstein and Lee do in other analyses (1995). Despite this shortcoming, the factors can be used to create indices that represent each type of parental involvement in Epstein's (1992) typology (Table 6).

Type I: Parent Obligations. Three factors can be considered as indicators of this type of parental involvement. One factor concerns educational expectations in terms of additional education after high school and future educational attainment. Two additional factors indicate parental control of the child's TV viewing and academic/behavioral supervision (doing homework, household chores, and maintaining a certain grade average).

Type II: Parent/School Communications. This is represented by two factors. The first — containing both school- and parent-initiated communication — relates to student's academic performance and behavior. The second factor, based only upon school-initiated communication, involves academic issues (school's academic program, student's high school program placement, and course selection).

Type III: Support of School. One factor consists of both parent- and school-initiated contacts regarding school volunteering, fund raising, and school records.

Type IV: Learning Activities. Three factors can be considered as indicators of this type. Two of the factors concern parents' efforts to enhance their child's talent development and learning opportunities through additional private lessons: (i) enrollment in private lessons that enhance typical academic learning (e.g., history, language, computers), and (ii) enrollment in art-related lessons (music and dance). An additional factor relevant to this type of parental involvement indicates how often parents talk to the eighth grader about school-related experiences and plans.

Type V: School Decision-Making. One factor represents the degree to which parents participate in school programs by means of parent-teacher organizations.

Type VI: Community Access. Two factors indicate the degree to which parents encourage their children's participation in community organizations and activities, such as student visits to museums and participation in scout or brownie clubs.

Table 6: Base Year Parental Involvement Orthogonal Factor Analysis

	Variable Name	Factor Pattern	Variable Description
TYPE 1: PARENT OBLIGATIONS			***Family Rules For:***
TV Viewing Supervision	BYP64D	.79	School Day Television
	BYP64C	.76	Television Hours
	BYP64B	.61	Television Time
	BYP64A	.61	Television Programs
Educational Expectations			**Expectations:**
	BYP83	.77	Additional Education
	BYP76	.76	Attainment Level
Academic/Behavioral Supervision			***Family rules for:***
	BYP65B	.63	Doing homework
	BYP65C	.55	Household Chores
	BYP65A	.52	Maintaining Average
TYPE 2: COMMUNICATIONS			***Parent Contacts About:***
Educational Contacts with School	BYP58C	.79	Behavior
	BYP58A	.63	Academic Performance
	BYP58B	.55	Academic Program
			School Contacts About:
	BYP57E	.70	Behavior
School Initiated Academic Contacts			***School Contacts About:***
	BYP57C	.81	H.S. Course Selection
	BYP57D	.80	H.S. Program Placement
	BYP57B	.60	Academic Program
TYPE 3: SUPPORT OF SCHOOL			
Social Contacts with School			***Parent Contacts About:***
	BYP58D	.62	Fund Raising
	BYP58E	.59	School Records
	BYP58F	.57	Volunteer Work
			School Contacts About:
	BYP57F	.59	Fund Raising
	BYP58D	.59	School Records
	BYP58D	.59	Volunteer Work

Table 6 (continued)			
TYPE 4: LEARNING ACTIVITIES			***Outside Regular School:***
Academic Lessons	BYP60F	.59	History Study
	BYP60D	.56	Language Study
	BYP60G	.56	Computer Study
	BYP60A	.48	Art Study
Music/Dance Lessons			***Outside Regular School:***
	BYP60B	.45	Music Study
	BYP60C	.42	Dance Study
Parent/Teen Academic Communication			***Parent Speaks About:***
	BYP67	.83	H.S. Plans
	BYP68	.79	Post H.S. Plans
	BYP66	.63	School Experiences
TYPE 5: DECISION-MAKING			***Parent Teacher Organization:***
Parent Teacher Organization Participation	BYP59B	.72	Attend
	BYP59C	.72	Participate
	BYP59A	.70	Belong
TYPE 6: COMMUNITY ACCESS			***Child Visits:***
Museum Visits	BYP61EB	.82	History Museum
	BYP61DB	.80	Science Museum
	BYP61CB	.76	Art Museum
Participation in Community Groups			***Child's Involvement:***
	BYP63A	.80	Boy/Girl Scouts
	BYP63B	.80	Cub Scouts/Brownies
	BYP63G	.44	Sports Teams

Twelfth Grade Parental Involvement and Analyses

Factor analysis of the twelfth grade variables yields a total of fifteen factors. They tend to follow Epstein's (1992) parental involvement typology as well (Table 7).

Type I: Parent Obligations. Six factors represent styles of parenting. Two factors represent communications with students concerning general issues in teens' lives (Parent/Teen Communications), and time spent in various activities with teen (Parent/Teen Activities). Three factors represent parent decision-making power regarding teen's entertainment (Behavioral Supervision), school effort (Knowledge of Teen's Coursework), and further education (Academic Supervision). A final factor indicates parents' additional expenses for enhancing their teen's learning opportunities (Private Education Expenses).

Type II: Parent/School Communications. Four factors fall into the second category of the typology. Three factors represent parent/school contacts regarding teen's educational opportunities. They distinguish parent-initiated contacts regarding teen's academic

opportunities and post-high school plans, school-initiated contacts regarding academic performance and preparation for college, and parent/school communications regarding teen's behavior at school. The fourth factor relates to parents' problems in communicating with school personnel.

Type III: Support of School. One factor represents this type and concerns parents' volunteering at school and participating in other social activities (hobby or sports activities).

Type IV: Learning Activities. This is represented by three factors. Two indicate parents' interests in teen's postsecondary education (Learn about Postsecondary Opportunities, and College Encouragement). The third factor indicates parental encouragement to complete some form of secondary education (Encouragement for High School Graduation).

Type V: School Decision-Making. Variables representing this type of parental involvement were not included in the twelfth grade parent questionnaire.

Type VI: Community Access. One factor indicates the degree to which parents communicate with each other about their children's learning opportunities at school and future plans (Parent to Parent Communication).

Table 7: Second Follow-Up Parental Involvement Orthogonal Factor Analysis

	Variable Name	Factor Pattern	Variable Description
TYPE 1: PARENT OBLIGATIONS			***Discuss with Teens About:***
	F2P49J	.66	Interests and Hobbies
	F2P49I	.64	Troubling Issues
	F2P49C	.63	Studies
Parent Teen Communication	F2P49B	.54	School Activities
	F2P49H	.53	Community, National or World Events
	F2P49D	.53	Teen's Grades
	F2P49A	.51	Course Selection
	F2P49G	.49	Teen's Job Application
			Parent and Teen Go:
	F2P50J	.70	To Restaurants
	F2P50I	.66	Shopping
Parent Teen Activities	F2P50L	.63	Do Fun Things
	F2P50G	.63	One Day Trips and Vacations
	F2P50F	.53	To Family Social Functions
	F2P50C	.46	To Concerts, Plays and Movies

Table 7 (continued)			
	Variable Name	**Factor Pattern**	**Variable Description**
TYPE 1: (CONTINUED)			***Who Decides Teen's:***
Behavioral Supervision	F2P48E	.76	Home Alcohol Consumption
	F2P48G	.71	Privileges
	F2P48A	.63	Late Hours
	F2P48F	.58	Overall Alcohol Consumption
	F2P48B	.53	Car Privileges
Knowledge of Teen's Coursework			***Parent Knows Teen's:***
	F2P46C	.86	Number of Credits Earned
	F2P46D	.86	Number of Credits Needed
	F2P46A	.56	Current Courses
	F2P46B	.46	Current Academic Performance
Academic Supervision			***Who Decides Teen's:***
	F2P48H	.76	College Attendance
	F2P48I	.75	Course Selection
	F2P48D	.64	Spending of Money
	F2P48C	.57	Work Status During School
Private Education Expenses			***Educational Expenses for:***
	F2P76A	.72	Private School
	F2P76B	.58	Tutoring
TYPE 2: COMMUNICATIONS			***Parent Contacts about***
Postsecondary Contacts with School	F2P44D	.77	College Prep Course Selection
	F2P44C	.77	Teen's Plans after High School
	F2P44B	.66	Academic Program
School-initiated Academic Contacts			***School Contacts about:***
	F2P43B	.72	Academic Program
	F2P43C	.69	Teen's Plans after High School
	F2P43D	.66	College Prep Course Selection
	F2P43H	.56	How to Help Teen with Work
	F2P43A	.55	Academic Performance
Problematic Communication with School			***Parent's Problems:***
	F2P26D	.95	Being Understood by Teachers
	F2P26C	.95	Understanding Teachers
Educational Contacts with School			***Parent Contacts about:***
	F2P44E	.74	Attendance
	F2P44F	.70	Behavior
			School Contacts about:
	F2P43E	.69	Attendance
	F2P43F	.67	Behavior

Table 7 (continued)			
	Variable Name	**Factor Pattern**	**Variable Description**
TYPE 3: SUPPORT OF SCHOOL			***Parent Contacts about:***
	F2P44G	.60	Volunteer Work
			School Contacts about:
	G2P43G	.55	Volunteer Work
Social Contacts with School			***Parent Attend with Teen:***
	F2P50A	.66	School Activities
	F2P50D	.62	Sports Outside School
			Parent Activities with Teen:
	F2P50H	.50	Hobby or Sports
TYPE 4: LEARNING			***Attends Programs about:***
	F2P45B	.78	College Financial Aid
Learn about Postsecondary Opportunities	F2P45A	.76	Education After High School
	F2P45C	.74	Employment Opportunities
			Parent Encourages Teen to:
Encouragement for High School Graduation	F2P62C	.70	Prepare for ASVAB
	F2P62D	.61	Prepare for GED
			Expectations:
	F2P61	.66	Attainment Level
			Parent Encourages Teen to:
	F2P62A	.52	Prepare for SAT
College Encouragement			***Talks with Teens about:***
	F2P63	.59	Applying for College
			Discuss with Teen about:
	F2P49F	.67	Applying to Colleges
	F2P49E	.59	Planning for SAT/ACT
TYPE 6: COMMUNITY ACCESS			***Discuss with Other Parents:***
	F2P56B	.91	Teen's Education Plans
Parent to Parent Communication	F2P56C	.90	Teen's Career Plans
	F2P56A	.76	Things at Teen's School

Eighth and Twelfth Grade Indices of Parental Involvement

Parental involvement indices were created based on the above factor analyses.[3] Additive scales (indices) were created by adding all variables included in the factor analysis after they were multiplied by their factor loadings. The indices are standardized with a mean

[3] The indices were created by the Factor Output option of the SAS software package.

of zero and a standard deviation of one. Twelve indices were created for the eighth grade data and fifteen for the twelfth grade data.

Race/Ethnic Variations in Indices

The degree to which racial and ethnic variations exist in the indices (scales) of parental involvement is shown in Tables 8a and 8b. The mean value of each standardized scale is calculated for each race/ethnic group separately. Comparisons of these group means show that all of the indices of parental involvement, in both grades, are highly associated with race and ethnicity.

Eighth grade mean comparisons show that Asian Americans are the group most likely to have the highest educational expectations, the highest student enrollment in academic private lessons, and the most student museum visits. This group, however, has the lowest levels of communication with their children, schools, and communities. Specifically, Asian American parents have the lowest levels of supervision and academic communication with their children at home. They also have the fewest contacts with school regarding academic/behavioral issues, as well as the least amount of participation in community groups.

Latinos tend to have relatively low levels of parental involvement in the eighth grade. They have the lowest mean scores for school-initiated academic contacts, and participation in social activities at school (Social Contacts with School). They also have very low levels of participation in parent/teacher organizations and in community groups.

African Americans have the highest levels of teen supervision; they have the strictest rules concerning TV viewing, as well as the highest levels of academic/behavioral supervision and academic communication with their teen. They also have the highest levels of participation in parent-teacher organizations. African American parents report the lowest levels of participation in formal artistic activities, such as music/dance private lessons and museum visits.

White parents have the most social contacts with school (such as volunteering and fund raising) and with community organizations (encouraging participation in brownie and boy/girl scouts). They also have the highest teen enrollments in art-related private lessons (music and dance). These parents report the lowest levels of TV viewing supervision and teen enrollment in academic-related private lessons.

Overall, the race and ethnic differences in parental involvement shown by analyzing the indices of involvement confirm those differences found in the individual variable cross

tabulations, as well as the findings of previous research on the NELS:88 data (Schneider & Coleman, 1993). The convergence of findings using different analytical strategies and by different researchers validates the capacity of these indices to correctly identify trends of parental involvement and distinguish differences between groups.

Table 8a: Average Values of Standardized Parental Involvement Factors by Race/Ethnicity (Eighth Grade)

TYPE 1	Asian	Latino	African American	White
TV Viewing Supervision	0.05	0.20	0.13	-0.05
Educational Expectations	0.35	-0.05	-0.06	0.01
Academic/Behavioral Supervision	-0.23	-0.12	0.15	0.00
TYPE 2				
School Initiated Academic Contacts	0.04	-0.02	-0.10	0.02
Educational Contacts with School	-0.23	0.13	0.13	-0.03
TYPE 3				
Social Contacts with School	-0.09	-0.21	-0.05	0.04
TYPE 4				
Parent/Teen Academic Communication	-0.20	-0.06	0.20	-0.02
Music/Dance Lessons	-0.22	-0.36	-0.45	0.13
Academic Lessons	0.49	-0.01	0.11	-0.04
TYPE 5				
Parent Teacher Organization Participation	0.08	-0.03	0.11	-0.02
TYPE 6				
Museum Visits	0.21	-0.06	-0.13	0.02
Participation in Community Groups	-0.53	-0.44	-0.21	0.12

Note: All differences of means by race/ethnicity are statistically significant at alpha <.01.

Twelfth Grade

Comparison of group mean differences of the twelfth grade indices show that Asian American parents are most involved in supervising teens' entertainment behavior (Behavioral Supervision). They also have the highest expenses for private education and are most likely to encourage their teen to attend college. Despite this, they continue to have the lowest levels of communication with their children (Parent/Teen Communication, Knowledge of Course Work, Academic Supervision), the school (Social Contacts with School), and the community (Parent

to Parent Communication). Their limited communication with school is also indicated by their very high levels of problematic communication with school personnel and low levels of all forms of parent/school contacts (Type 2 Parental Involvement).

Latino parents are most likely to spend time on common activities with their twelfth grader (Parent/Teen Activities). Although they report the highest educational contacts with school, they still have great difficulty in communicating with school personnel.

African American parents show the highest levels of activities related to teen's postsecondary opportunities (Postsecondary Contacts with School, Learn about Postsecondary Opportunities, Encouragement for High School Graduation). They are also the parents with the lowest levels of supervision of teens' entertainment-related activities (Behavioral Supervision).

Table 8b: Average Values of Standardized Parental Involvement Factors by Race/Ethnicity (Twelfth Grade)

TYPE 1	Asian	Latino	African American	White
Parent/Teen Communication	-0.37	0.00	-0.10	0.04
Parent Teen Activities	0.02	0.19	-0.03	-0.02
Behavioral Supervision	0.14	-0.22	-0.39	0.08
Knowledge of Teen's Course Work	-0.36	-0.09	-0.11	0.05
Academic Supervision	-0.17	-0.01	-0.06	0.02
Private Education Expenses	0.20	0.05	0.04	-0.02
TYPE 2				
Post Secondary Contacts with School	-0.11	-0.17	0.07	0.01
School Initiated Academic Contacts	-0.02	0.01	-0.01	0.00
Problematic Communication with School	0.88	1.32	-0.09	-0.16
Educational Contacts with School	0.05	0.12	0.01	-0.02
TYPE 3				
Social Contacts with School	-0.16	-0.12	-0.09	0.04
TYPE 4				
Learn About Post Secondary Opportunities	-0.01	0.09	0.14	-0.03
Encouragement for High School Graduation	-0.05	0.20	0.60	-0.12
College Encouragement	0.28	0.09	0.16	-0.05
TYPE 6				
Parent to Parent Communication	-0.27	-0.11	-0.06	0.04

Note: All differences of means by race/ethnicity are statistically significant at alpha <.01, except School Initiated Contacts.

Finally, White parents have the highest levels of parent/teen communication and knowledge about teens' coursework. They are also the parents most involved in teen's educational decisions (Academic Supervision), most active in social contacts with school, and most likely to communicate with other parents. But White parents show the least efforts in some activities that prepare students for their future beyond high school — they report the lowest expenses for private education and have the lowest scores in all three indices related to enhancing students' learning opportunities (Type 4 Parental Involvement).

Summary

Factor analyses reveal twelve factors for the eighth grade data and fifteen for the twelfth grade data that were used to create indices of parental involvement. These indices generally fall within the typology of family involvement in education developed by Epstein (1992).

Families with high educational aspirations for their children tend to provide out-of-school learning opportunities for them. In addition, some parents who uphold strict family rules in the eighth grade loosen their supervision by the twelfth grade and focus on improving their teens' future opportunities beyond high school.

Race/ethnic differences in parental involvement exist in both grades. Asian Americans have very high educational expectations for their children and invest in their children's educational opportunities by enrolling them in academic-related private lessons and in private schools. Latino parents have relatively low levels of parental involvement in the eighth grade, especially regarding parent/school contacts; difficulties in communication with school personnel were reported in the twelfth grade. However, this group of parents report spending a great amount of time in common activities with their teen during the twelfth grade. African Americans seem to loosen their levels of teen supervision in the twelfth grade. At this grade, they concentrate their efforts on improving teen's opportunities beyond high school, either by seeking information regarding postsecondary educational and career opportunities, or by encouraging their teens to graduate from high school and attend college. White parents have high levels of school volunteering and communication in both middle grades and senior high school. They also have high levels of community participation, as indicated by their eighth graders' enrollment in brownie and scout clubs and their communication with parents of other high school seniors. However, they are least likely to seek information regarding postsecondary opportunities or to encourage teen's high school graduation and college attendance. Perhaps these parents seek to enhance their children's future opportunities through other means, such as maintaining high levels of parent/teen communication and closely supervising academic progress in high school.

IV. College-Related Factors — Indices and Analyses

Variables indicating parental actions and behaviors that enhance their children's college opportunities were analyzed separately by grade.[4]

Eighth Grade

For families who expect their child to attend college, factor analyses yield five college-related factors (Table 9a).

Factor 1:	Parental Actions for Establishing College Funds[5]
Factor 2:	Limited Financial Aid Opportunities (due to student's low academic performance)
Factor 3:	Financially prepared for College (distinguishes those families for whom financing higher education is not a problem)
Factor 4:	Will Not Apply for Financial Aid
Factor 5:	Financial Aid Alternatives (such as expectation of children's independent financing of college education, or expectation of other relatives' contributions)

Twelfth Grade

For families who expect their child to attend college, twelfth grade factor analyses yield thirteen college-related factors (Table 9b)

Factor 1:	Utilizing Financial Aid Opportunities (types of financial aid that parents and teens plan to use for postsecondary education)
Factor 2:	Parental Actions Securing Postsecondary Funds
Factor 3:	Financial Aid Awareness (parent's knowledge about student loan programs)
Factors 4,5,6:	College Choice (academic, social, and economic factors considered in choosing a college)
Factor 7:	Financial Sacrifices for College
Factor 8:	Additional Earnings for College (such as teen's savings, or a second job)
Factor 9:	Discussions Concerning College (parent/teen communications about postsecondary schools)
Factor 10:	Will Not Apply for Financial Aid
Factor 11:	Acquiring Financial Aid Information
Factors 12,13:	Alternative Sources of Financing Postsecondary Education (such as social security or other benefits, or other relatives' contributions)

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[4] See Appendix A and B for a list of variables included in these factor analyses. These factor analyses are based on the sub-sample of parents who have college expectations for their children.

[5] In this part of the analysis, all parents who had not started savings received a value of zero for all college financing variables.

Table 9a: Base Year Parental Involvement College-related Variables Orthogonal Factor Analysis		
Variable Name	**Factor Pattern**	**Variable Description**
Factor 1		***Actions Securing College Funds:***
BYP84	0.91	Saved Any Money For Child Ed After H.S.
BYP84AA	0.83	Started a Savings Account
BYP84B	0.77	Money Parent Set Aside For Child's Future Ed
BYP84AB	0.65	Bought An Insurance Policy
BYP84AD	0.55	Made Investments in Stocks/Real Estate
BYP84AC	0.54	Bought US Savings Bonds
BYP84AG	0.49	Established Another Form of Savings
BYP84AF	0.49	Started Working/Taken an Additional Job
Factor 2		***Limited Financial Aid Opportunities:***
BYP85F	0.92	Child's Test Scores Not Good Enough to Qualify
BYP85E	0.92	Child's Grades Not Good Enough to Qualify
Factor 3		***Financially Prepared for College:***
BYP84C	0.76	Money Parent Expects to Set Aside For Child's Ed
BYP84D	0.65	Expect Amount to Cover Cost of Child's Ed
BYP84AE	0.42	Set up a Trust Fund
Factor 4		***Will Not Apply for Financial Aid:***
BYP85H	0.76	Not Much Information on Financial Aid
BYP85G	0.72	Too Much Work To Apply For Financial Aid
BYP85D	0.57	Family Income Too High For Loan or Scholarship
Factor 5		***Financial Aid Alternatives:***
BYP85A	0.73	Child Will be Able to Earn Money For Ed
BYP85J	0.53	Relatives Will Help Pay Child's College Expenses
BYP85B	0.50	Parent Can Pay For Child's Ed without Assistance
BYP85I	0.48	Do Not See Way to Get Money for College
BYP85C	0.47	Family Not Willing to go into Debt for Child's Ed

Table 9b: Second Follow-Up Parental Involvement College-Related Variables Orthogonal Factor Analysis		
Variable Name	**Factor Pattern**	**Variable Description**
Factor 1		***Utilizing Financial Aid Opportunities:***
F2P85B	0.76	Will use scholarships, grants for teens study
F2P92I	0.75	Will use scholarships/grants for teens ed
F2P86B	0.74	Respondent or teen has applied for scholarships/grants
F2P88	0.60	Teen has applied for financial aid
F2P86C	0.49	Respondent or teen has applied for work programs
F2P85C	0.49	Plan to use work programs for teens : tdy
F2P92J	0.44	Use state or federal loans for teens ed
Factor 2		***Actions Securing College Funds:***
F2P79A	0.63	Respondent started a savings account
F2P79D	0.55	Respondent made investments in stocks/real estate
F2P79E	0.50	Respondent set up a trust fund
F2P81	0.50	Money Respondent set aside for teen's future education
F2P79C	0.47	Respondent bought U.S. savings bonds
F2P79B	0.43	Respondent bought an insurance policy
F2P80	-0.72	Grade teen in when Respondent started saving
Factor 3		***Financial Aid Awareness:***
F2P87A	0.73	Respondent knows about state student loan program
F2P87C	0.72	Respondent knows about college student loan program
F2P87B	0.70	Respondent knows about federal loan program
F2P87D	0.70	Respondent knows about private education loans
Factor 4		***College Choice — Academic Considerations:***
F2P66J	0.74	Teen's college- importance job placement
F2P66L	0.68	Teen's college- importance of academic rep
F2P66K	0.67	Teen's college- imp of grad sch placement
F2P66N	0.63	Teen's college- desired program available
F2P66C	0.56	Teen's college- importance of curriculum
F2P66I	0.52	Teen's college- importance of low crime
Factor 5		***College Choice — Social Considerations:***
F2P66P	0.68	Teen's college- importance of size of school
F2P66O	0.65	Teen's college- importance of racial/ethnic comp
F2P66E	0.60	Teen's college- importance of social life
F2P66D	0.53	Teen's college- importance of sport program
F2P66Q	0.51	Teen's college- importance of geographic location
F2P66H	0.47	Teen's college- importance religious environment
F2P66R	0.44	Teen's college- importance of attend R's school

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Table 9b (continued)		
Variable Name	**Factor Pattern**	**Variable Description**
Factor 6		***College Choice — Convenience/Affordability:***
F2P66F	0.72	Teen's college- importance of live at home
F2P66A	0.63	Teen's college- importance of low cost
F2P66M	0.58	Teen's college- easy admission standards
F2P90	-0.44	Amount expect to spend teens educ next yr
F2P67	-0.47	Visited how many schools with teen
Factor 7		***Financial Sacrifices for College:***
F2P92C	0.69	Will use 2nd mortgage for teens ed
F2P79I	0.63	Respondent planned to remortgage property/take loan
F2P92D	0.60	Will use borrowing for teens ed
F2P91	0.58	Amount of debt ok for teens educ next yr
Factor 8		***Additional Earnings for College:***
F2P79J	0.60	Respondent had teen put aside earnings
F2P92F	0.59	Use child's earnings/savings for teens ed
F2P79H	0.45	Respondent planned to reduce expenses in some way
F2P79F	0.44	Respondent started working another job/more hours
Factor 9		***Parent/Teen Discussions Concerning College:***
F2P65C	0.69	Respondent talked to teen in general about schools
F2P65B	0.68	Respondent talked to teen about particular schools
F2P65D	0.66	Respondent gave teen information from school
F2P65E	0.45	Respondent offered to take teen to private counselor
Factor 10		***Will Not Apply for Financial Aid:***
F2P89F	0.68	Not much information on financial aid
F2P89J	0.62	Don't know how to apply
F2P89G	0.57	No money available for aid
F2P89E	0.51	Too much work to apply for financial aid
F2P89C	0.43	We don't want to report financial situation
F2P89I	0.42	Missed the deadline for application
Factor 11		***Acquiring Financial Aid Information:***
F2P84B	0.64	Talked w/coll rep about financial aid
F2P84F	0.61	Read college info on financial aid
F2P84A	0.51	Talked w/high school guidance counselor abt fin aid
F2P84E	0.48	Read U.S. Dept of Educ info on financial aid
Factor 12		***Financial Aid Alternatives:***
F2P92K	0.44	Use soc sec/vet admn benfts for teens ed
F2P92L	0.44	Other source to pay for teen's ed
F2P84G	0.40	Read about financial aid through military
F2P89A	-0.52	Can pay for teen ed without assistance
Factor 13		***Contribution of Extended Family:***
F2P92H	0.65	Use relatives contributions for teen's ed
F2P89H	0.59	Relatives will help pay teen's coll expenses
F2P92G	0.42	Will use trust fund for teen's ed
F2P92E	0.40	Will use alimony/child support for teen's education

Investigation of between-grade correlation coefficients of indices revealed only a few noteworthy correlations (Table 10). As expected, parents' savings for college in the eighth grade is associated with the twelfth grade actions for securing college funds (correlation coefficient of .45). Financial preparation for college in the eighth grade is also associated with parents' taking actions to secure college funds in the twelfth grade (correlation coefficient of .27). Financial preparation for college in the eighth grade is negatively associated with twelfth grade parents' decision to utilize additional earnings for college and with considering affordability as an important factor for choosing a college (coefficients of -.30 and -.23, respectively).

Table 10: Between-Grade Correlation Coefficients of College-Related Parental Involvement

Grade 12	Grade 8				
	Actions Securing College Funds	***Limited Financial Aid Opportunities***	***Financially Prepared for College***	***Will not Apply for Financial Aid***	***Financial Aid Alternatives***
Utilizing Financial Aid Opportunities	-0.02	0.18	-0.10	0.08	-0.01 *
Actions Securing College Funds	0.45	0.02 *	0.27	-0.09	0.09
Financial Aid Awareness	0.04	0.09	-0.04	0.07	0.13
College Choice — Academic Considerations	0.03	0.03	-0.02	0.00	-0.05
College Choice — Social Considerations	-0.03	-0.02 *	0.04	0.01 *	-0.05
College Choice — Convenience/ Affordability	-0.10	-0.08	-0.23	0.03	-0.14
Financial Sacrifices for College	0.04	-0.01*	-0.01 *	0.00	0.07
Additional Earnings for College	0.05	0.06	-0.30	0.01 *	0.04
Discussions Concerning College	0.10	-0.03	0.07	0.04	0.10
Will not Apply for Financial Aid	0.00	0.00	-0.05	-0.04	-0.04
Acquiring Financial Aid Information	0.04	0.02	-0.08	0.01 *	0.00
Financial Aid Alternatives	-0.06	-0.02 *	-0.10	0.08	-0.07
Contribution of Extended Family	0.02	-0.01 *	-0.06	0.04	-0.05

* Coefficients *not* significant at alpha < .01.

Eighth grade limited financial aid opportunities is modestly associated with parents' seeking to utilize financial aid opportunities such as grants, work programs, and federal loans. All other indices show very weak correlations, partly because the factors do not include parallel items between the two grades.

Group means by race/ethnicity for the indices created are not presented here. Individual variable cross-tabulations with race/ethnicity that were presented in an earlier section show strong differences in the patterns of college-related parental involvement. These patterns are repeated in the associations between race/ethnicity and college-related indices.

Summary

Factor analyses of college-related parental involvement reveal five factors for the eighth grade and thirteen for the twelfth grade data. Between-grade associations of indices show that parents who began saving for college in the eighth grade continue to be most active in savings in the twelfth grade. They are the parents most likely to establish trust funds, and invest in stocks and real estate. They are more likely than others to have parent/teen discussions concerning college and less likely to consider issues such as convenience and affordability as factors for choosing a college. Parents who are most financially prepared to meet college expenses in the eighth grade are likely to continue taking actions that secure college funds in the twelfth grade. Financially prepared parents and families tend not to consider convenience and affordability as important factors for choosing a college; they are also less likely to plan financing college through additional earnings such as teen's savings or a second job.

Summary and Conclusions

This study analyzes patterns of parental involvement for the sub-sample of parents in the NELS:88 survey whose children remained in school until the twelfth grade.[6] Comparative analyses between the eighth and twelfth grade parent surveys reveal some clear shifts in the intensity and ways in which parents are involved with their children's education. As their children get closer to high school graduation, parents are less involved with individual behaviors of students. Instead, parents increase their educational expectations for their children and focus their attention on learning opportunities. Parents report that their communication

[6] The study is based on 13,580 cases for which data is available from both parents and their children in the eighth and twelfth grades. Parents whose children dropped out of school at any time between the eighth and twelfth grades are not included in this study.

with school increased between the two grades in terms of contacts about the school's programs and volunteering in school. Both schools and parents initiate such contacts more often in high school than in the middle grades. However, a higher proportion of parents report dissatisfaction with high schools than with middle schools, especially concerning parents' role in school policy.

The drop in parental involvement with children's daily activities was also apparent in a study of the tenth grade data of NELS:88 (Lee, 1995). Lee (1995) suggests that perhaps this is an indication of parents' efforts to help adolescents become independent, or that adolescents have already internalized parents' values and rules and do not need as close supervision. Increases in educational expectations and parent-school communication were not reported in the above study. Perhaps as students near high school graduation, parents become increasingly concerned about their teen's further education and about the effects of high school programs on postsecondary opportunities. Also, parents may increase their estimates of their teen's capabilities for further education, since the students were successful in reaching the twelfth grade. Renewed expectations and concerns over postsecondary education may also explain why more parents are dissatisfied with their ability to influence school policy; they may wish that high schools would do more to assist their children's transition to college.

Although most parents expected their child to continue his/her education after high school, only a few had started saving by the eighth grade. It seems that parents expect to save most for college during their child's high school years. By the twelfth grade, most parents had discussions with their children about postsecondary schools. Parents indicated that in choosing a postsecondary school, teens consider academic issues and curricula more than school track records for career placement. Most parents have some knowledge about financial aid and expect to finance their teen's further education through grants and scholarships. About one-half of the parents had already applied for such programs a few months before their teen's high school graduation.

Almost all data analyses in this report show clear and consistent differences by race/ethnicity in the ways in which parents are involved with their children's education and in the actions they take to secure funds for college. These differences exist for both grade levels, although some tend to narrow in the twelfth grade. Both the individual questionnaire items and the indices of parental involvement created confirm racial and ethnic patterns reported in earlier investigations (Muller & Kerbow, 1993; Lee, 1995) and reveal some new, previously unreported ones.

Asian American parents have the highest educational aspirations for their children and seek to enhance their learning opportunities through private schooling, out-of-school classes, and museum visits. These parents also take actions to secure funds for their teen's college education earlier than other parents and expect to finance their child's college education primarily through savings; to do so, some may take a second job.

Latino parents tend to have low levels of parental involvement in the middle grades. By adolescents' twelfth grade, Latino parents spent more time than any other group in common activities with their teen. Moreover, despite reported difficulties in communication with school personnel, they have the highest levels of academic-related contacts with high schools.

African Americans tend to maintain strict supervision at home even as their children reach the last year in high school; they talk regularly with their children about education and encourage their educational pursuits. African American families have as high educational expectations for their children as Asian Americans. Although African Americans have better knowledge concerning sources of financial aid than Asian Americans, they are less likely to take actions to secure college funds for their teens.

White parents have high levels of interaction with both the school and with the larger community during their teen's eighth and twelfth grades. In the eighth grade, they are the group with the most knowledge about financial aid for college and in the twelfth grade they are the parents most likely to rely on loans for financing further education. During that time, they are also least concerned about their child's individual behaviors and most concerned about their learning opportunities in school. This may explain why White parents, more than others, wish that they had more decision-making power in school policies.

As children near high school graduation some common concerns may emerge among all parents regarding their children's future opportunities. This may explain why the gap in race/ethnic differences narrows at the twelfth grade level in terms of parents' educational expectations, private school expenses, parent-initiated contacts with school about student behavior, and parental satisfaction with their role in school policy. However, many other differences remain and even widen, indicating that parents of different racial/ethnic backgrounds approach issues of parental involvement and financing postsecondary education differently. Some of the race/ethnic differences that widen over the years include maintaining rules over homework and grades, course decision-making, and communications with school about student performance.

Further analysis is needed to determine the degree to which these differences between race/ethnic groups are due to factors such as student achievement, parental education, or socioeconomic status.

Overall, the data presented in this report indicate that parental involvement in adolescents' education does not decline from the middle grades to high school. Rather, it shifts its focus from students' individual behaviors to the schools' learning opportunities. The findings show that parents of high school students welcome opportunities for communication with schools and desire greater participation in the school decision-making process. They would also greatly benefit from programs that inform and direct their efforts to finance their child's postsecondary education. Such information and guidance would be especially helpful for minority parents, many of whom may not be adequately informed about financing possibilities and resort to either taking on an additional job or asking the assistance of other family members. Families would also benefit from programs that guide them through the financial aid application process during their teen's senior year in high school. Given the rising costs of postsecondary education, such programs in secondary education could become critical in enhancing the future opportunities of many students, especially those from minority and disadvantaged backgrounds.

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Appendix A

Parental Involvement Factor Analyses

Using principal component, orthogonal factor analyses with equimax rotations, factor scales are created to identify different typologies of parental involvement. Initially, a correlation matrix shows that many pairs of these variables are significantly associated at a P=.0001 level.

On the basis of minimum eigenvalue criteria: twelve significant factors emerge to reveal six diverse areas or typologies of parental involvement for the base year data, fifteen significant factors emerge to reveal five typologies for the second follow-up data. There are five, rather than six, typologies for the second follow-up data because there are no survey items addressing respondent's role in school decision-making or parent-teacher organizations. Factor analyses of parents' obligations for college access reveal five significant factors for the base year and thirteen for the second follow-up data.

Oblique versus Orthogonal Rotation

Comparisons, between oblique factor analyses with promax rotations and the orthogonal analyses with equimax rotations, drive the decision for the use of orthogonal on the basis of the overall strength of the orthogonal factor patterns. Use of traditional orthogonal factor analyses eliminates any correlation between the factors.

Base Year Parental Involvement Variables Included in Factor Analysis

BYP57B	CONTACTED ABOUT ACADEMIC PROGRAM
BYP57C	CONTACTED ABOUT H.S. COURSE SELECTION
BYP57D	CONTACTED ABOUT PLACEMNT DEC RE H.S. PGM
BYP57E	CONTACTED ABOUT BEHAVIOR IN SCHOOL
BYP57F	CONTACTED ABOUT SCHOOL FUND RAISING
BYP57G	CONTACTED ABOUT INFO FOR SCHOOL RECORDS
BYP57H	CONTACTED ABOUT VOLUNTEER WORK AT SCHOOL
BYP58A	CONTACTED SCHOOL ABOUT ACADEMIC PERFORMANCE
BYP58B	CONTACTED SCHOOL ABOUT ACADEMIC PROGRAM
BYP58C	CONTACTED SCHOOL ABOUT BEHAVIOR
BYP58D	CONTACTED SCHOOL ABOUT FUND RAISING
BYP58E	CONTACTD SCHOOL ABOUT INFO FOR SCH RECORDS
BYP58F	CONTACTED SCHOOL ABOUT DOING VOLUNTEER WORK
BYP59A	BELONG TO PARENT-TEACHER ORGANIZATION
BYP59B	ATTEND PARENT-TEACHER ORGANIZTN MEETINGS
BYP59C	TAKE PART IN PARENT-TEACH ORG ACTIVITIES
BYP59E	BELONG TO ANY OTHER ORGANIZATION
BYP60A	CHILD STUDY ART OUTSIDE REGULAR SCHOOL
BYP60B	CHILD STUDY MUSIC OUTSIDE REGULAR SCHOOL
BYP60C	CHILD STUDY DANCE OUTSIDE REGULAR SCHOOL

Appendix A (continued)

Base Year Parental Involvement Variables Included in Factor Analysis	
BYP60D	CHILD STUDY LANGUAGE OUTSIDE REGULAR SCHOOL
BYP60F	CHILD STUDY HISTORY OUTSIDE REGULAR SCHOOL
BYP60G	CHILD STUDY COMPUTER OUTSIDE REGULAR SCHOOL
BYP60H	CHILD STUDY OTHER SKILLS OUTSIDE REG SCHOOL
BYP61AB	8TH GRADER BORROWS BOOKS FROM PUB LIBRARY
BYP61BB	8TH GRADER ATTENDS CONCERTS/MUSICAL EVENTS
BYP61CB	8TH GRADER GOES TO ART MUSEUMS
BYP61DB	8TH GRADER GOES TO SCIENCE MUSEUMS
BYP61EB	8TH GRADER GOES TO HISTORY MUSEUMS
BYP63A	CHILD EVER INVOLVED IN BOY/GIRL SCOUTS
BYP63B	CHILD EVER INVOLVED IN CUB SCOUTS/BROWNIES
BYP63C	CHILD EVER INVOLVED IN CAMPFIRE/BLUEBIRDS
BYP63D	CHILD EVER INVOLVED IN BOYS-GIRLS CLUB
BYP63F	CHILD EVER INVOLVED IN YMCA, YWCA, JCC
BYP63G	CHILD EVER INVOLVED IN SPORTS TEAMS
BYP63H	CHILD EVER INVOLVED IN 4-H CLUB
BYP63I	CHILD EVER INVOLVED IN COMMUNITY GROUP
BYP64A	FAMILY RULE ABOUT PROGRAMS CHILD MAY WATCH
BYP64B	FAMILY RULE HOW EARLY/LATE CHILD WATCH TV
BYP64C	FAMILY RULE HOW MANY HRS CHILD WATCH TV
BYP64D	FAMILY RULE HOW MANY HRS WATCH TV ON SCHOOL DAYS
BYP65A	FAMILY RULE ABOUT MAINTAINING GRADE AVG
BYP65B	FAMILY RULE ABOUT DOING HOMEWORK
BYP65C	FAMILY RULE ABOUT DOING HOUSEHOLD CHORES
BYP66	HOW OFTEN TALKS TO CHILD ABOUT SCHOOL EXPERIENCES
BYP67	HOW OFTEN TALKS TO CHILD ABOUT H.S. PLANS
BYP68	HOW OFTEN TALKS TO CHILD RE POST H.S. PLANS
BYP69	HOW OFTEN HELP CHILD WITH HOMEWORK
BYP76	HOW FAR IN SCHOOL R EXPECT CHILD TO GO
BYP77	WHO WILL DECIDE CHILD'S H.S. COURSES
BYP82B	ANY EDUCATIONAL EXPENSES FOR PRIVATE SCHOOL
BYP82D	ANY EDUCATIONAL EXPENSES FOR TUTORING
BYP83	EXPECT CHILD WILL GO ON TO ADDITIONAL ED

* R = Respondent

Appendix B

Second Follow-Up Parental Involvement Variables Included in Factor Analysis	
F2P26C	R HAS PROBLEMS UNDERSTANDING TEEN'S TEACHERS
F2P26D	R HAS PROBLEMS MAKING SELF UNDERSTOOD BY TEACHERS
F2P43A	SCHOOL CONTACTED R ABOUT ACADEMIC PERFORMANCE
F2P43B	SCHOOL CONTACTED R ABOUT ACADEMIC PROGRAM
F2P43C	SCHOOL CONTACTED R ABOUT TEEN'S PLANS AFTER H.S.
F2P43D	SCHOOL CONTACTED R ABOUT COLLEGE PREP COURSE SEL
F2P43E	SCHOOL CONTACTED R ABOUT TEEN'S ATTENDANCE
F2P43F	SCHOOL CONTACTED R ABOUT TEEN'S BEHAVIOR
F2P43G	SCHOOL CONTACTED R ABOUT VOLUNTEER WORK AT SCHOOL
F2P43H	SCHOOL CONTACT R ABOUT HOW TO HELP TEEN W/WORK
F2P44	CONTACTED SCHOOL ABOUT COLLEGE PREP COURSE SEL
F2P44B	CONTACTED SCHOOL ABOUT ACADEMIC PROGRAM
F2P44C	CONTACTED SCHOOL ABOUT TEEN'S PLANS AFTER H.S.
F2P44E	CONTACTED SCHOOL ABOUT TEEN'S ATTENDANCE
F2P44F	CONTACTED SCHOOL ABOUT TEEN'S BEHAVIOR
F2P44G	CONTACTED SCHOOL ABOUT DOING VOLUNTEER WORK
F2P45A	ATTENDED PROGRAM ABOUT EDUCATIONAL OPPS AFTER HS
F2P45B	ATTENDED PROGRAM ABOUT COLLEGE FINANCIAL AID
F2P45C	ATTENDED PROGRAM ABOUT EMPLOYMENT OPPORT
F2P46A	R KNOWS WHICH COURSES TEEN IS TAKING
F2P46B	R KNOWS HOW WELL TEEN IS DOING IN SCHOOL
F2P46C	R KNOWS # OF CREDITS TEEN HAS TOWARD GRAD
F2P46D	R KNOWS # CREDITS TEEN NEEDS TO GRADUATE
F2P48A	WHO DECIDES HOW LATE TEEN CAN STAY OUT
F2P48B	WHO DECIDES WHEN TEEN CAN USE CAR
F2P48C	WHO DECIDES WHETHER TEEN CAN HAVE A JOB
F2P48D	WHO DECIDES HOW TEEN SPENDS OWN MONEY
F2P48E	WHO DECIDES IF TEEN DRINKS ALCOHOL AT HOME
F2P48F	WHO DECIDES IF TEEN CAN DRINK ALCOHOL
F2P48G	WHO DECIDES IF PRIVILEGES ARE TAKEN AWAY
F2P48H	WHO DECIDES WHETHER TEEN SHOULD GO TO COLLEGE
F2P48I	WHO DECIDES WHICH COURSES TEEN TAKES

Appendix B (continued)

Second Follow-Up Parental Involvement Variables Included in Factor Analysis	
F2P49A	DISCUSS WITH TEEN SELECTING COURSES
F2P49B	DISCUSS WITH TEEN SCHOOL ACTIVITIES
F2P49C	DISCUSS W/ TEEN THINGS TEEN HAS STUDIED
F2P49D	DISCUSS WITH TEEN TEEN'S GRADES
F2P49E	DISCUSS WITH TEEN PLANS TO TAKE SAT/ACT
F2P49F	DISCUSS WITH TEEN APPLYING TO COLLEGES
F2P49G	DISCUSS W/ TEEN JOBS TEEN MIGHT APPLY
F2P49H	DISCUSS W/TEEN COMMUNITY/NAT'L/WORLD EVENTS
F2P49I	DISCUSS WITH TEEN THINGS TROUBLING TEEN
F2P49J	DISCUSS W/TEEN TEEN'S INTERESTS/HOBBIES
F2P50A	ATTENDED SCHOOL ACTIVITIES WITH TEEN
F2P50B	WORKED ON HOMEWORK/PROJECTS WITH TEEN
F2P50C	ATTENDED CONCERTS, PLAYS, MOVIES W/TEEN
F2P50D	ATTENDED SPORTS EVENTS OUTSIDE SCHOOL W/TEEN
F2P50E	ATTENDED RELIGIOUS SERVICES WITH TEEN
F2P50F	ATTENDED FAMILY SOCIAL FUNCTIONS W/TEEN
F2P50G	TOOK DAY TRIPS/VACATIONS WITH TEEN
F2P50H	WORKED ON HOBBY/PLAYED SPORTS WITH TEEN
F2P50I	WENT SHOPPING WITH TEEN
F2P50J	WENT TO RESTAURANTS/ATE OUT WITH TEEN
F2P50L	DID SOMETHING ELSE FUN WITH TEEN
F2P56A	DISCUSS THINGS AT TEEN'S SCHOOL W/OTHER PARENT
F2P56B	DISCUSS TEEN'S EDUCATION PLANS W/OTHER PARENTS
F2P56C	DISCUSS TEEN'S CAREER PLANS W/OTHER PARENTS
F2P61	HOW FAR IN SCHOOL R EXPECTS TEEN TO GO
F2P62A	R ENCOURAGED TEEN TO PREPARE FOR SAT
F2P62C	R ENCOURAGED TEEN TO PREPARE FOR ASVAB
F2P62D	R ENCOURAGED TEEN TO PREPARE FOR GED
F2P63	R TALKED TO TEEN ABOUT APPLYING FOR COLLEGE
F2P76A	ANY EDUCATIONAL EXPENSES FOR PRIVATE SCHOOL
F2P76B	ANY EDUCATIONAL EXPENSES FOR TUTORING

Appendix C

Base Year College-Related Parental Involvement Variables Included in Factor Analysis	
BYP84	SAVED ANY MONEY FOR CHILD ED AFTER H.S.
BYP84AA	STARTED A SAVINGS ACCOUNT
BYP84AB	BOUGHT AN INSURANCE POLICY
BYP84AC	BOUGHT U.S. SAVINGS BONDS
BYP84AD	MADE INVESTMENTS IN STOCKS/REAL ESTATE
BYP84AE	SET UP A TRUST FUND
BYP84AF	STARTED WORKING/TAKEN AN ADDITIONAL JOB
BYP84AG	ESTABLISHED ANOTHER FORM OF SAVINGS
BYP84B	MONEY R SET ASIDE FOR CHILD'S FUTURE ED
BYP84C	MONEY R EXPECT TO SET ASIDE FOR CHILD ED
BYP84D	EXPECT AMOUNT TO COVER COST OF CHILD ED
BYP85A	CHILD WILL BE ABLE TO EARN MONEY FOR ED
BYP85B	CAN PAY FOR CHILD ED WITHOUT ASSISTANCE
BYP85C	FAMILY NOT WILLING GO INTO DEBT FOR ED
BYP85D	FAMILY INCOME TOO HIGH FOR LOAN/SCHOLARSHIP
BYP85E	CHILD GRADES NOT HIGH ENOUGH TO QUALIFY
BYP85F	CHILD TEST SCORES NOT GOOD ENOUGH QUALIFY
BYP85G	TOO MUCH WORK TO APPLY FOR FINANCIAL AID
BYP85H	NOT MUCH INFORMATION ON FINANCIAL AID
BYP85I	DON'T SEE WAY TO GET MONEY FOR COLLEGE
BYP85J	RELATIVES WILL HELP PAY CHILD COLLEGE EXPENSES

Appendix D

Second Follow-Up College-Related Parental Involvement Variables Included in Factor Analysis	
F2P65A	TEEN WANTS TO DECIDE ABOUT COLLEGE BY SELF
F2P65B	R TALKED TO TEEN ABOUT PARTICULAR SCHOOLS
F2P65C	R TALKED TO TEEN IN GENERAL ABOUT SCHOOLS
F2P65D	R GAVE TEEN INFORMATION FROM SCHOOL
F2P65E	R OFFERED TO TAKE TEEN TO PRIVATE COUNSELOR
F2P66A	TEEN'S COLLEGE- IMPORTANCE OF LOW COST
F2P66B	TEEN'S COLLEGE- IMPORTANCE FINANCIAL AID
F2P66C	TEEN'S COLLEGE- IMPORTANCE OF CURRICULUM
F2P66D	TEEN'S COLLEGE- IMPORTANCE OF SPORT PROGRAM
F2P66E	TEEN'S COLLEGE- IMPORTANCE OF SOCIAL LIFE
F2P66F	TEEN'S COLLEGE- IMPORTANCE OF LIVE AT HOME
F2P66H	TEEN'S COLLEGE- IMPORTANCE RELIGIOUS ENVIRONMENT
F2P66I	TEEN'S COLLEGE- IMPORTANCE OF LOW CRIME
F2P66J	TEEN'S COLLEGE- IMPORTANCE JOB PLACEMENT
F2P66K	TEEN'S COLLEGE- IMP OF GRAD SCHOOL PLACEMENT
F2P66L	TEEN'S COLLEGE- IMPORTANCE OF ACADEMIC REP
F2P66M	TEEN'S COLLEGE- EASY ADMISSION STANDARDS
F2P66N	TEEN'S COLLEGE- DESIRED PROGRAM AVAILABLE
F2P66O	TEEN'S COLLEGE- IMP OF RACIAL/ETHNIC COMPOSITION
F2P66P	TEEN'S COLLEGE- IMP OF SIZE OF SCHOOL
F2P66Q	TEEN'S COLLEGE- IMP OF GEOGRAPHIC LOCATION
F2P66R	TEEN'S COLLEGE- IMP OF ATTEND R'S SCHOOL
F2P67	VISITED HOW MANY SCHOOLS WITH TEEN
F2P68	A PARTICULAR CAREER INTERESTS YOUR TEEN
F2P79A	R STARTED A SAVINGS ACCOUNT
F2P79B	R BOUGHT AN INSURANCE POLICY
F2P79C	R BOUGHT U.S. SAVINGS BONDS
F2P79D	R MADE INVESTMENTS IN STOCKS/REAL ESTATE
F2P79E	SET UP A TRUST
F2P79F	R STARTED WORKING ANOTHER JOB/MORE HOURS
F2P79G	R ESTABLISHED ANOTHER FORM OF SAVINGS
F2P79H	R PLANNED TO REDUCE EXPENSES IN SOME WAY
F2P79I	R PLANNED TO REMORTGAGE PROPERTY/TAKE LOAN
F2P79J	R HAD TEEN PUT ASIDE EARNINGS
F2P80	GRADE TEEN IN WHEN R STARTED SAVING
F2P81	MONEY R SET ASIDE FOR TEEN'S FUTURE ED
F2P82	EXPECT AMOUNT TO COVER COST OF EDUCATION
F2P84A	TALKED W/HS GUIDANCE COUNSELOR ABOUT FIN AID

Appendix D (continued)

Second Follow-Up College- Related Parental Involvement Variables Included in Factor Analysis	
F2P84B	TALKED W/COLLEGE REP ABOUT FINANCIAL AID
F2P84C	TALKED W/LOAN OFFICER ABOUT FINANCIAL AID
F2P84D	TALKED W/OTHER PERSON ABOUT FINANCIAL AID
F2P84E	READ U.S. DEPT OF EDUCATION INFO ON FINANCIAL AID
F2P84F	READ COLLEGE INFO ON FINANCIAL AID
F2P84G	READ ABOUT FINANCIAL AID THROUGH MILITARY
F2P85A	PLAN TO USE LOANS TO PAY FOR TEEN'S STUDY
F2P85B	WILL USE SCHOLARSHIPS, GRANTS FOR TEEN'S STUDY
F2P85C	PLAN TO USE WORK PROGRAMS FOR TEEN'S STUDY
F2P86B	R OR TEEN HAS APPLIED FOR SCHOLARSHIPS/GRANTS
F2P86C	R OR TEEN HAS APPLIED FOR WORK PROGRAMS
F2P87A	R KNOWS ABOUT STATE STUDENT LOAN PROGRAM
F2P87B	R KNOWS ABOUT FEDERAL LOAN PROGRAM
F2P87C	R KNOWS ABOUT COLLEGE STUDENT LOAN PROGRAM
F2P87D	R KNOWS ABOUT PRIVATE EDUCATION LOANS
F2P88	TEEN HAS APPLIED FOR FINANCIAL AID
F2P89A	CAN PAY FOR TEEN ED WITHOUT ASSISTANCE
F2P89B	TEEN GRADES NOT HIGH ENOUGH TO QUALIFY
F2P89C	WE DON'T WANT TO REPORT FINANCIAL SITUATION
F2P89E	TOO MUCH WORK TO APPLY FOR FINANCIAL AID
F2P89F	NOT MUCH INFORMATION ON FINANCIAL AID
F2P89G	NO MONEY AVAILABLE FOR AID
F2P89H	RELATIVES WILL HELP PAY TEEN COLLEGE EXPENSES
F2P89I	MISSED THE DEADLINE FOR APPLICATION
F2P89J	DON'T KNOW HOW TO APPLY
F2P90	AMOUNT EXPECT TO SPEND TEEN'S EDUCATION NEXT YEAR
F2P91	AMOUNT OF DEBT OK FOR TEEN'S EDUCATION NEXT YEAR
F2P92A	WILL USE CURRENT EARNINGS FOR TEEN'S EDUCATION
F2P92C	WILL USE 2ND MORTGAGE FOR TEEN'S EDUCATION
F2P92D	WILL USE BORROWING FOR TEEN'S EDUCATION
F2P92E	WILL USE ALIMONY/CHILD SUP FOR TEEN'S EDUCATION
F2P92F	USE CHILD'S EARNINGS/SAVINGS FOR TEEN'S EDUCATION
F2P92G	WILL USE TRUST FUND FOR TEEN'S EDUCATION
F2P92H	USE RELATIVES' CONTRIBUTIONS FOR TEEN'S EDUCATION
F2P92I	WILL USE SCHOLARSHIPS/GRANTS FOR TEEN'S EDUCATION
F2P92J	USE STATE OR FEDERAL LOANS FOR TEEN'S EDUCATION
F2P92K	USE SOC SEC/VET ADMIN BENEFITS FOR TEEN'S EDUCATION
F2P92L	OTHER SOURCE TO PAY FOR TEEN'S EDUCATION

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